

REMARKS

Claims 19, 20, 22, 24, 25, and 27-30 were rejected under 35 U.S.C. §102(b) as being anticipated by Covington (U.S. 5,833,843). Applicants respectfully traverse this rejection.

Covington discloses a filter cartridge 10 that includes an annular filter element 12, a cylindrical housing 14, an annular end cap 23, an end plate 30, a cover 36, a filter element support 45, and a valve member 60. The cylindrical housing 14 includes a closed end against which a spring 21 is abutted, an open end having a lip against which the cover 36 is crimped by a peripheral crimp 38, and a cylindrical side wall that extends from the open end to the closed end.

The annular filter element 12 has a first end 19 with a closed, dished end cap 20 against which the spring 21 is abutted, and a second end that includes an annular end cap 23. The end cap 23 has an outer axial flange 24, an inner axial flange 27 surrounding a central opening 28, and a radially extending plate 29 that connects the inner and outer axial flanges 24, 27 to one another.

The end plate 30 encloses the filter element 12 in the housing 14. The end plate 30 includes a threaded outlet 32 and a plurality of inlet openings 34. The end cap 30 is held proximate the end of the housing by the cover 36. The valve member support 45 is seated against the end plate 30, and the valve member 60 is retained between the inner flange 27 of the end cap 23 and the filter element support 45.

Covington describes the end cap 23 as part of an assembly that includes the annular filter element 12 (see col. 3, lines 35-45). At least Figures 1, 8, 9, and 10 illustrate that the end cap 23 is spaced apart from the housing 14 and is not directly engaged with or in any way extending from or a part of the housing 14. The housing 12 described by Covington is a single piece that extends from the closed end to the open end. The end cap 23 does not in any way meet the limitation of claim 1 of "being circumferential and extending completely along an internal surface of the housing wall." The radially extending plate 29 is not an inwardly extending ledge of the housing, in contrast the characterization of feature 29 set forth in the present rejection.

Applicants further submit that no feature of Covington meets the limitation of "an inwardly extending ledge" of the housing as set forth in claim 19. Each of the end plate 30, cover 36, filter element support 45 and valve member 60 disclosed by Covington are described as separate and distinct features from the housing 14 and provide functionality that is unique and separate from the structure and functionality of the housing 14. Therefore, Applicants submit that Covington fails to disclose every limitation of claim 19 and the claims that depend from it.

Claims 19-21, 23, 26 and 31-36 were rejected under 35 U.S.C. §102(b) as being anticipated by Oelschlaegel (U.S. 6,146,527). Applicants respectfully traverse this rejection.

Oelschlaegel discloses a filter cartridge 10 that includes a housing 12 that encloses a replaceable element 14. The housing 12 includes a main housing portion 32 and a removable end closure 34. The main housing portion 32 includes an open end 42 defining a generally circular opening 46 with a radially in-turned lip 44. An opposite end of the main housing portion 32 includes a plurality of threads for threaded connection to the end closure 34. The open end 42 is void of threads. All other features of the filter cartridge 10 disclosed by Oelschlaegel are not part or portion of the housing 12. Oelschlaegel discloses as separate and distinct features the filter element 14 and a disk-shaped hub member 102 that is positioned between the filter element 14 and the annular lip 44 at the open end 42 of the main housing portion 32. The mounting hub 102 includes a cylindrical collar 103 and a first annular plate 104. The collar 103 includes a plurality of threads and extends through the opening 46 at the open end 42. The plate 104 includes a series of through holes 106 sized to receive drive pins 94 extending axially from an end of the filter element 14.

As noted above, the hub member 102 is not part of the housing 12. The housing 12 defined by Oelschlaegel includes two portions 32, 34 which together define an interior volume within which the filter element 14 is positioned. The hub member 102 is a separate and distinct feature having specific functionality that differs from the housing 12. Furthermore, the hub member 102 does not include features that meet the limitation of an inwardly extending ledge "being circumferential and extending completely along an internal surface of the housing wall," as required by claims 19 and 32. In contrast, a portion of the hub member 102 extends through

the opening 46 at the open end 42 of the main housing member 32 rather than being a portion of the housing that is "an inwardly extending ledge."

Still further, as noted above, the housing 12 disclosed by Oelschlaegel does not include a "threaded region adjacent to the open end," as required by claims 19 and 32. The only threaded features of the housing 12 are located at the interface of the housing members 32, 34, which interface is at an end of the housing 12 opposite the open end 42. The threaded portion 126 of the hub member 102 is not part of the housing 12, but rather is a separate and distinct member that provides fluid flow paths into and out of the housing 12.

In view of the above, Applicants submit that Oelschlaegel fails to disclose every limitation of claims 19 and 32, and the claims that depend from it.

Oelschlaegel also fails to disclose every limitation of the method of claim 33 for similar reasons to those discussed above related to claims 19 and 32. Because the hub member 102 is a separate and distinct member from the housing 12, the hub member 102 does not meet the limitation of "an inwardly extending circumferential ledge extending completely along an internal surface of the housing," as required by claim 33. Furthermore, it is not the hub member 102 that secures the filter element 14 in the housing 12. As noted with reference to the cross-sectional view of Figure 2 of Oelschlaegel, the filter element 14 has a size greater than the opening 46 at the open end 42 of the housing 12. The filter element 14 is retained within the housing 12 by removing the end closure 34 of the housing 12, inserting the filter element 14, and re-attaching the housing members 32, 34 together. In contrast, the rejection asserts that the projections 94 of the filter element 14 engaged in the through holes 106 of the hub member 102 that secure the filter cartridge in the housing. Thus, Oelschlaegel fails to disclose every limitation of claim 33 and the claims that depend from it.

Further, even if the engagement of the projections 94 with the hub member 102 were to in some way secure the filter element 14 and the housing 12, which the Applicants do not concede is possible, Applicants note that the projections 94 actually engage within the through holes 106 of the hub member 102. The interface between the projections 94 and the hub member 102 is along surface of the hub member that are facing in a direction perpendicular a direction

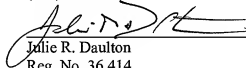
that is "directed to a closed end of the housing," as required by claim 33. Therefore, Applicants submit that Oelschlaegel fails to disclose every limitation of claim 33 and the claims that depend from it for this additional reason.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance. If a phone conference would be helpful in resolving any further issues related to this matter, please contact Applicants' attorney listed below at 612-332-5300.

Respectfully submitted,

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